

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**



1600

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/944,030A

DATE: 11/10/2003
TIME: 11:01:47

Input Set : A:\PTO.YF.txt
Output Set: N:\CRF4\11102003\I944030A.raw

3 <110> APPLICANT: Muimo, Richard
4 Mehta, Anil
6 <120> TITLE OF INVENTION: METHODS OF DETERMINING ALTERED NDPK FUNCTIONS AND THE
DIAGNOSIS OF CYSTIC
7 FIBROSIS
9 <130> FILE REFERENCE: 002.00190
11 <140> CURRENT APPLICATION NUMBER: 09/944,030A
12 <141> CURRENT FILING DATE: 2001-08-31
14 <150> PRIOR APPLICATION NUMBER: PCT/GB00/00736
15 <151> PRIOR FILING DATE: 2000-03-02
17 <160> NUMBER OF SEQ ID NOS: 12
19 <170> SOFTWARE: PatentIn version 3.1
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 14
23 <212> TYPE: PRT
24 <213> ORGANISM: Homo sapiens
26 <400> SEQUENCE: 1
28 Lys Glu Asn Ile Ile Phe Gly Val Ser Tyr Asp Glu Tyr Arg
29 1 5 10
32 <210> SEQ ID NO: 2
33 <211> LENGTH: 14
34 <212> TYPE: PRT
35 <213> ORGANISM: Ovis aries
37 <400> SEQUENCE: 2
39 Lys Asp Asn Ile Ile Phe Gly Val Ser Tyr Asp Glu Tyr Arg
40 1 5 10
43 <210> SEQ ID NO: 3
44 <211> LENGTH: 13
45 <212> TYPE: PRT
46 <213> ORGANISM: Homo sapiens
48 <400> SEQUENCE: 3
50 Lys Glu Asn Ile Ile Gly Val Ser Tyr Asp Glu Tyr Arg
51 1 5 10
54 <210> SEQ ID NO: 4
55 <211> LENGTH: 15
56 <212> TYPE: PRT
57 <213> ORGANISM: Artificial Sequence
59 <220> FEATURE:
60 <223> OTHER INFORMATION: Description of Artificial Sequence: Peptide of F508 region of
ovi
61 ne wild-type cftr with added terminal cysteine
63 <400> SEQUENCE: 4
65 Lys Asp Asn Ile Ile Phe Gly Val Ser Tyr Asp Glu Tyr Arg Cys
66 1 5 10 15

ENTERED

69 <210> SEQ ID NO: 5

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/944,030A

DATE: 11/10/2003
TIME: 11:01:47

Input Set : A:\PTO.YF.txt
Output Set: N:\CRF4\11102003\I944030A.raw

70 <211> LENGTH: 15
71 <212> TYPE: PRT
72 <213> ORGANISM: Mus musculus
74 <400> SEQUENCE: 5
76 Ser Glu Glu Leu Ala Val Asn Asp Asp Leu Ala Asp Ser Ala Arg
77 1 5 10 15
80 <210> SEQ ID NO: 6
81 <211> LENGTH: 12
82 <212> TYPE: PRT
83 <213> ORGANISM: Mus musculus
85 <400> SEQUENCE: 6
87 Val Leu Asp Leu Glu Leu Lys Gly Asp Ile Glu Lys
88 1 5 10
91 <210> SEQ ID NO: 7
92 <211> LENGTH: 346
93 <212> TYPE: PRT
94 <213> ORGANISM: Bos taurus
96 <400> SEQUENCE: 7
98 Met Ala Met Val Ser Glu Phe Leu Lys Gln Ala Trp Phe Ile Glu Asn
99 1 5 10 15
102 Glu Glu Gln Glu Tyr Ile Lys Thr Val Lys Gly Ser Lys Gly Gly Pro
103 20 25 30
106 Gly Ser Ala Val Ser Pro Tyr Pro Thr Phe Asn Pro Ser Ser Asp Val
107 35 40 45
110 Glu Ala Leu His Lys Ala Ile Thr Val Lys Gly Val Asp Glu Ala Thr
111 50 55 60
114 Ile Ile Glu Ile Leu Thr Lys Arg Asn Asn Ala Gln Arg Gln Gln Ile
115 65 70 75 80
118 Lys Ala Ala Tyr Leu Gln Glu Lys Gly Lys Pro Leu Asp Glu Val Leu
119 85 90 95
122 Lys Lys Ala Leu Leu Gly His Leu Glu Glu Val Val Leu Ala Leu Leu
123 100 105 110
126 Lys Thr Pro Ala Gln Phe Asp Ala Glu Glu Leu Arg Ala Ala Met Lys
127 115 120 125
130 Gly Leu Gly Thr Asp Glu Asp Thr Leu Asn Glu Ile Leu Ala Ser Arg
131 130 135 140
134 Thr Asn Arg Glu Ile Arg Glu Ile Asn Arg Val His Arg Glu Glu Leu
135 145 150 155 160
138 Lys Arg Asp Leu Ala Lys Asp Ile Ala Ser Asp Thr Ser Gly Asp Tyr
139 165 170 175
142 Glu Lys Ala Leu Leu Ala Leu Ala Lys Gly Asp Arg Ser Glu Glu Leu
143 180 185 190
146 Ala Val Asn Asp Asp Leu Ala Asp Ser Asp Ala Arg Ala Leu Tyr Glu
147 195 200 205
150 Ala Gly Glu Arg Arg Lys Gly Thr Asp Val Asn Val Phe Thr Thr Ile
151 210 215 220
154 Leu Thr Thr Arg Ser Tyr Pro His Leu Arg Arg Val Phe Gln Lys Tyr
155 225 230 235 240
158 Ser Lys Tyr Ser Lys His Asp Met Asn Lys Val Leu Asp Leu Glu Leu

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/944,030A

DATE: 11/10/2003
TIME: 11:01:47

Input Set : A:\PTO.YF.txt
Output Set: N:\CRF4\11102003\I944030A.raw

159 245 250 255
 162 Lys Gly Asp Ile Glu Lys Cys Leu Thr Val Ile Val Lys Cys Ala Thr
 163 260 265 270
 166 Ser Gln Pro Met Phe Phe Ala Glu Lys Leu His Gln Ala Met Lys Gly
 167 275 280 285
 170 Ile Gly Thr Arg His Lys Thr Leu Ile Arg Ile Met Val Ser Arg Ser
 171 290 295 300
 174 Glu Ile Asp Met Asn Asp Ile Lys Ala Cys Tyr Gln Lys Leu Tyr Gly
 175 305 310 315 320
 178 Ile Ser Leu Cys Gln Ala Ile Leu Asp Glu Thr Lys Gly Asp Tyr Glu
 179 325 330 335
 182 Lys Ile Leu Val Ala Leu Cys Gly Arg Asp
 183 340 345
 186 <210> SEQ ID NO: 8
 187 <211> LENGTH: 67
 188 <212> TYPE: PRT
 189 <213> ORGANISM: Oryctolagus cuniculus
 191 <400> SEQUENCE: 8
 193 Arg Ser Tyr Leu His Leu Arg Arg Val Phe Gln Lys Tyr Ser Lys Tyr
 194 1 5 10 15
 197 Ser Gln His Asp Met Asn Lys Val Leu Asp Leu Glu Leu Lys Gly Asp
 198 20 25 30
 201 Ile Glu Lys Cys Leu Thr Ala Ile Val Gln Cys Ala Thr Cys Lys Pro
 202 35 40 45
 205 Ala Tyr Phe Ala Glu Lys Leu Tyr Gln Ala Met Lys Gly Ala Gly Thr
 206 50 55 60
 209 Arg His Lys
 210 65
 213 <210> SEQ ID NO: 9
 214 <211> LENGTH: 67
 215 <212> TYPE: PRT
 216 <213> ORGANISM: Homo sapiens
 218 <400> SEQUENCE: 9
 220 Arg Ser Tyr Pro Gln Leu Arg Arg Val Phe Gln Lys Tyr Thr Lys Tyr
 221 1 5 10 15
 224 Ser Lys His Asp Met Asn Lys Val Leu Asp Leu Glu Leu Lys Gly Asp
 225 20 25 30
 228 Ile Glu Lys Cys Leu Thr Ala Ile Val Lys Cys Ala Thr Cys Lys Pro
 229 35 40 45
 232 Ala Phe Phe Ala Glu Lys Leu His Gln Ala Met Lys Gly Val Gly Thr
 233 50 55 60
 236 Arg His Lys
 237 65
 240 <210> SEQ ID NO: 10
 241 <211> LENGTH: 67
 242 <212> TYPE: PRT
 243 <213> ORGANISM: Bos taurus
 245 <400> SEQUENCE: 10
 247 Arg Ser Tyr Pro His Leu Arg Arg Val Phe Gln Lys Tyr Ser Lys Tyr

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/944,030A

DATE: 11/10/2003
TIME: 11:01:47

Input Set : A:\PTO.YF.txt
Output Set: N:\CRF4\11102003\I944030A.raw

248 1 5 10 15
251 Ser Lys His Asp Met Asn Lys Val Leu Asp Leu Glu Leu Lys Gly Asp
252 20 25 30
255 Ile Glu Lys Cys Leu Thr Val Ile Val Lys Cys Ala Thr Ser Gln Pro
256 35 40 45
259 Met Phe Phe Ala Glu Lys Leu His Gln Ala Met Lys Gly Ile Gly Thr
260 50 55 60
263 Arg His Lys
264 65
267 <210> SEQ ID NO: 11
268 <211> LENGTH: 67
269 <212> TYPE: PRT
270 <213> ORGANISM: Mus musculus
272 <400> SEQUENCE: 11
274 Arg Ser Phe Pro His Leu Arg Arg Val Phe Gln Asn Tyr Gly Lys Tyr
275 1 5 10 15
278 Ser Gln His Asp Met Asn Lys Ala Leu Asp Leu Glu Leu Lys Gly Asp
279 20 25 30
282 Ile Glu Lys Cys Leu Thr Thr Ile Val Lys Cys Ala Thr Ser Thr Pro
283 35 40 45
286 Ala Phe Phe Ala Glu Lys Leu Tyr Glu Ala Met Lys Gly Ala Gly Thr
287 50 55 60
290 Arg His Lys
291 65
294 <210> SEQ ID NO: 12
295 <211> LENGTH: 11
296 <212> TYPE: PRT
297 <213> ORGANISM: Homo sapiens
299 <400> SEQUENCE: 12
301 Thr Ala Ser Gly Val Ala Glu Thr Thr Asn Cys
302 1 5 10

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 11/10/2003
PATENT APPLICATION: US/09/944,030A TIME: 11:01:48

Input Set : A:\PTO.YF.txt
Output Set: N:\CRF4\11102003\I944030A.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 6

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/944,030A

DATE: 11/10/2003

TIME: 11:01:48

Input Set : A:\PTO.YF.txt

Output Set: N:\CRF4\11102003\I944030A.raw